

ABSTRACT OF THE DISCLOSURE

Provided is a voltage regulator which has a high speed response property in a low consumption current and is stably operable in a low output capacitance. The voltage regulator has: a differential amplifier for comparing an output of a reference voltage circuit with an output of a voltage dividing circuit and outputting a first signal; a phase compensating circuit in which a resistor and a capacitor are connected in series; a MOS transistor in which an output of the differential amplifier is inputted to a gate electrode, which is connected between a power supply and the phase compensating circuit, and in which a source is grounded; a constant current circuit connected between the MOS transistor and a ground; and an output transistor in which a second signal output from a connection point between the MOS transistor and the phase compensating circuit is inputted to a gate electrode and which is connected between the power supply and the voltage dividing circuit. A resistor side of the phase compensating circuit is connected with an output terminal of the differential amplifier and a capacitor side of the phase compensating circuit is connected with a drain electrode of the MOS transistor.